

VALID

Pat. No. 05673832 - 1
Issue Date: 10/28/02

Group ID: B
User ID: ginab

Page 1
KS: 5,080

Warning [Pages Of US References:]

page 5 has no references
page 6 has no references

Warning [Pages Of Foreign References:]

page 1 has no references
page 2 has no references
page 3 has no references
page 5 has no references
page 6 has no references
page 7 has no references

Warning [Pages Of Other References:]

page 1 has no references
page 2 has no references
page 3 has no references
page 4 has no references

Done
83
2/26
ERROR p. 2

PTOL85b INFO

SERIAL NUMBER FILING DATE

09/165,513 10/02/98

ASSIGNEE DATA PRESENT DATE FEE PAID

Yes 01/29/03

EMAIL ADDRESS

=====

ATTORNEYS

Type: Firm/First: Middle: Last:

Firm Townsend and Townsend and Crew LLP

=====

ASSIGNEES

Code: Firm/First: Middle: Last:

02 United Module Corporation, Inc.

City: State: Country:

San Francisco CA

Text:

=====

REFERENCES (Page 7) SERIAL NUMBER: 09/165,513
FORM 1449

U.S. REFERENCES

<u>U.S. Pat No.</u>	<u>Date</u>	<u>Patentee</u>	<u>Class</u>	<u>SubClass</u>
<u>5,411,797</u>	<u>05/1995</u>	<u>Davanloo et al.</u>		
<u>5,470,661</u>	<u>11/1995</u>	<u>Bailey et al.</u>		
<u>5,569,501</u>	<u>10/1996</u>	<u>Bailey et al.</u>		
<u>5,945,191</u>	<u>08/1999</u>	<u>Hwang et al.</u>		

*6,064,148 05/2000 Tolt et al.
No issue date available.

FOREIGN REFERENCES

<u>Foreign Doc No.</u>	<u>Date</u>	<u>Country</u>	<u>Class</u>	<u>SubClass</u>
------------------------	-------------	----------------	--------------	-----------------

OTHER REFERENCE CITATIONS (incl. Author, Title, Date, Pertinent Pages, etc.)

Park, K.C. et al., +37 Enhancement of Field-Emission Characteristics
by Using Hydrogen-Free Diamond-Like Carbon Film Deposited by
Plasma-Enhanced Chemical Vapor Deposition+38 +0 (1996) SID 96 Digest
pp. 49-52.

PR Newswire. CeBIT Showcase for Major Advance in Magnetic Disk Storage
Capacity. Feb. 2000 Hanover, Germany. website:
<http://www.prnewswire.com> (Feb. 19, 2000).

***** End of edited forms *****

CHECK LIST

Rule 47 Continuing Data PCT Disclaimer

No Yes No No

Microfiche Appendix CPA tag

No No

Foreign Priority Claimed: No
Acknowledged: No

State Code: MN Country Code:

Text Endorsement: 09165513.100298

=====

JACKET

<u>SERIAL NUMBER</u>	<u>FILING DATE</u>	<u>CLASS</u>	<u>SUBCLASS</u>	<u>GAU</u>
09/165,513	10/02/98	428	408	1773

FOREIGN PRIORITY
Country Document Number Date

DISCLAIMER

/ /

TITLE

Recording media having protective overcoats of highly tetrahedral
amorphous carbon and methods for their production

MICROFICHE APPENDIX

ASSISTANT EXAMINER:

First: Middle: Last:

PRIMARY EXAMINER:

First: Middle: Last:

Stevan A. Resan

CLAIMS ALLOWED
Total Print

24 1

DRAWINGS
Sheets Figures Print

12 20 Y

=====

BLUE SLIP INFORMATION

<u>SERIAL NUMBER</u>	<u>CLASS</u>	<u>SUBCLASS</u>	<u>GAU</u>
09/165,513	428	408	1773

<u>INDEP. CLAIMS</u>	<u>TOTAL CLAIMS</u>
1, 21, 23, 24	24

=====

BLUE SLIP (Page 1)

INTERNATIONAL CLASSIFICATION
Class SubClass

G11B 5/72

CROSS-REFERENCES
Class SubClass

428 694 TC

=====

TERM EXTENSION

0

FIELD OF SEARCH

Class SubClass

428 408; 694 TC

=====

Pat. No. 05673832 - 1
Issue Date: 10/28/02

Group ID: B
User ID: ginab

Page 5

PTOL85b INFO

SERIAL NUMBER FILING DATE

09/165,513 10/02/98

ASSIGNEE DATA PRESENT DATE FEE PAID

Yes 01/29/03

EMAIL ADDRESS

=====

ATTORNEYS

Type: Firm/First: Middle: Last:

Firm Townsend and Townsend and Crew LLP

=====

ASSIGNEES

Code: Firm/First: Middle: Last:

02 United Module Corporation, Inc.

City: State: Country:

San Francisco CA

Text:

=====

OATH

INVENTOR NAME

First: Middle: Last: Signed:

Veerasamy Vijayen Yes

City: Farmington Hills

State: MN ZIP Code: Country: Foreign ZIP:

INVENTOR NAME

OTHER REFERENCE CITATIONS (incl. Author, Title, Date, Pertinent Pages, etc.)

=====

REFERENCES (Page 2) SERIAL NUMBER: 09/165,513
FORM 892

U.S. REFERENCES

<u>U.S. Pat No.</u>	<u>Date</u>	<u>Patentee</u>	<u>Class</u>	<u>SubClass</u>
4,749,608	06/1988	Nakayama et al.	428	216
5,364,690	11/1994	Takahashi et al.	428	212

FOREIGN REFERENCES

<u>Foreign Doc No.</u>	<u>Date</u>	<u>Country</u>	<u>Class</u>	<u>SubClass</u>
------------------------	-------------	----------------	--------------	-----------------

OTHER REFERENCE CITATIONS (incl. Author, Title, Date, Pertinent Pages, etc.)

=====

REFERENCES (Page 3) SERIAL NUMBER: 09/165,513
FORM 892

U.S. REFERENCES

<u>U.S. Pat No.</u>	<u>Date</u>	<u>Patentee</u>	<u>Class</u>	<u>SubClass</u>
5,607,783	03/1997	Onodera	428	694 T
5,616,179	04/1997	Baldwin et al.	117	108
5,637,393	06/1997	Ueda et al.	428	332
5,705,272	01/1998	Taniguchi	428	408
5,852,303	12/1998	Cuomo et al.	257	9

FOREIGN REFERENCES

<u>Foreign Doc No.</u>	<u>Date</u>	<u>Country</u>	<u>Class</u>	<u>SubClass</u>
------------------------	-------------	----------------	--------------	-----------------

OTHER REFERENCE CITATIONS (incl. Author, Title, Date, Pertinent Pages, etc.)

=====

REFERENCES (Page 4) SERIAL NUMBER: 09/165,513
FORM 1449

U.S. REFERENCES

<u>U.S. Pat No.</u>	<u>Date</u>	<u>Patentee</u>	<u>Class</u>	<u>SubClass</u>
4,123,316	10/1978	Tsuchimoto	156	643
4,226,666	10/1980	Winters et al.	156	643

4,822,466	04/1989 Rabalais et al.	204	192.15
5,017,835	05/1991 Oechsner	315	111.81
5,064,809	11/1991 Hed	505	1
5,082,359	01/1992 Kirkpatrick	359	642
5,082,522	01/1992 Purdes et al.	156	612
5,091,049	02/1992 Campbell et al.	156	643
5,126,206	06/1992 Garg et al.	428	408
5,156,703	10/1992 Oechsner	156	643
5,182,132	01/1993 Murai et al.	427	577
5,186,973	02/1993 Garg et al.	427	590
5,246,884	09/1993 Jaso et al.	437	225
5,374,318	12/1994 Rabalais et al.	148	33
5,423,915	06/1995 Murata et al.	118	723
5,462,784	10/1995 Grill et al.	428	65.5
5,466,431	11/1995 Dorfman et al.	423	446
5,559,367	09/1996 Cohen et al.	257	77

FOREIGN REFERENCES

<u>Foreign Doc No.</u>	<u>Date</u>	<u>Country</u>	<u>Class</u>	<u>SubClass</u>
02168540	06/1990	JPX	H01J	27/18
0 552 491 A1	07/1993	EPX	H01J	37/32
0 595 564 A2	05/1994	EPX	G11B	5/72
06349054	12/1994	JPX	G11B	5/72
0 700 033 A2	03/1996	EPX	G11B	5/31

OTHER REFERENCE CITATIONS (incl. Author, Title, Date, Pertinent Pages, etc.)

=====

REFERENCES (Page 5) SERIAL NUMBER: 09/165,513

FORM 1449

U.S. REFERENCES

<u>U.S. Pat No.</u>	<u>Date</u>	<u>Patentee</u>	<u>Class</u>	<u>SubClass</u>
---------------------	-------------	-----------------	--------------	-----------------

FOREIGN REFERENCES

<u>Foreign Doc No.</u>	<u>Date</u>	<u>Country</u>	<u>Class</u>	<u>SubClass</u>
------------------------	-------------	----------------	--------------	-----------------

OTHER REFERENCE CITATIONS (incl. Author, Title, Date, Pertinent Pages, etc.)

Boxman, R.L. et al. [37 Recent Progress in Filtered Vacuum Arc
Deposition, [38 [0 [i Paper submitted, Int. Conf. Metallurgical
Coatings and Thin Films[1 , San Diego, Apr. 1996.

Veerasamy, V.S. et al. [37 Electronic Density of States in Highly
Tetrahedral Amorphous Carbon, [38 [0 [i Solid-State Electronics]1 ,
vol. 37, No. 2, pp. 319-326, 1994.

Weiler, M. et al. [37 Preparation and Properties of Highly Tetrahedral
Hydrogenated Amorphous Carbon, [38 [0 [i Physical Review B[1 , vol. 53,
No. 3, pp. 1594-1608, 1996.

Weiler, M. et al. [37 Structure of Amorphous Hydrogenated Caron:
Experiment and Computer Simulation, [38 [0 [i Diamond and Related
Materials]1 , vol. 3, pp. 245-253, 1994.

Chhowalla, M. et al. [37 Deposition of Smooth Tetrahedral Amorphous
Carbon Thin Films Using a Cathodic Arc Without a Macroparticle
Filter, [38 [0 [i Appl. Phys. Lett.[1 , vol. 67, No. 7, pp. 894-896,
1995.

Chhowalla, M. et al. [37 Stationary Carbon Cathodic Arc: Plasma and
Film Characterization, [38 [0 [i J. Appl. Phys.[1 , vol. 79, No. 5, pp.

2237-2244, 1996.

Oechsner, H. [37 Electron Cyclotron Wave Resonances and Power
Absorption Effects in Electrodeless Low Pressure H.F. Plasmas with a
Superimposed Static Magnetic Field, [38 [0 [i Plasma Physics [1 , vol.
16, pp. 835-844, 1974.

Oechsner, H. et al. [37 An RF Plasma Beam Source for Thin Film and
Surface Technology, [38 [0 [i Proc. 1st Int. Conf. on Plasma Surface
Engineering, Garmisch Partenkirchen [1 , 1988, vol. II, DGM
Informationen Gesellschaft, Obvuroel, pp. 1017-1024, 1989.

Pfeiffer, B. [37 Skin Effect in Anisotropic Plasmas and Resonance
Excitation of Electron-Cyclotron Waves. I. Theory, [38 [0 [i Journal of
Applied Physics [1 , vol. 37, No. 4, pp. 1624-1627, 1966.

Sager, O. [37 The Influence of Nonuniform Density Distribution and
Electron Temperature on the Helicon-Resonances in Low Pressure
Discharges, [38]0 1971.

Szuszczewicz, Edward P., [37 Spatial Distributions of Plasma Density
in a High-Frequency Discharge with a Superimposed Static Magnetic
Field, [38 [0 [i The Physics of Fluids [1 , vol. 15, No. 12, pp.

2240-2246, 1972.

Weiler, M. et al. [37 Highly Tetrahedral, Diamond-like Amorphous
Hydrogenated Carbon Prepared from a Plasma Beam Source, [38 [0 [i Appl.
Phys. Lett. [1 , vol. 64, No. 23, pp. 2797-2799, 1994.

K[e,uml u[ee hn, M., et al. [37 Deposition of Carbon Films By A
Filtered Cathodic Arc[38 , [i Diamond and Related Materials[1 , vol.
2, No. 10, Aug. 1993, pp. 1350-1354.

Grill, A., et al. [37 Diamondlike Carbon Films by rf Plasma-Assisted
Chemical Vapor Deposition from Acetylene,[38 [0 [i IBM J. Res.
Develop.[1 , vol. 34, No. 6, Nov. 1990, pp. 849-857.

Aisenberg, S., et al. [37 Ion-Beam Deposition of Thin Films of
Diamondlike Carbon,[38 [0 [i J. Appl. Phys.[1 , vol. 42, No. 7, Jun.
1971, pp. 2953-2958.

Grill, A., et al. [37 Diamondlike Carbon Deposited by DC PACVD,[38 [0
[i Diamond Films and Techn.[1 , vol. 1, No. 4, (1992), pp. 219-233.

=====

REFERENCES (Page 6) SERIAL NUMBER: 09/165,513
FORM 1449

U.S. REFERENCES

<u>U.S. Pat No.</u>	<u>Date</u>	<u>Patentee</u>	<u>Class</u>	<u>SubClass</u>
---------------------	-------------	-----------------	--------------	-----------------

FOREIGN REFERENCES

<u>Foreign Doc No.</u>	<u>Date</u>	<u>Country</u>	<u>Class</u>	<u>SubClass</u>
------------------------	-------------	----------------	--------------	-----------------

OTHER REFERENCE CITATIONS (incl. Author, Title, Date, Pertinent Pages, etc.)

Dissertation by Vijayen S. Veerasamy, 1994.

=====

REFERENCES (Page 7) SERIAL NUMBER: 09/165,513
FORM 1449

U.S. REFERENCES

<u>U.S. Pat No.</u>	<u>Date</u>	<u>Patentee</u>	<u>Class</u>	<u>SubClass</u>
---------------------	-------------	-----------------	--------------	-----------------

5,411,797	05/1995	Davanloo et al.		
-----------	---------	-----------------	--	--

5,470,661	11/1995	Bailey et al.		
-----------	---------	---------------	--	--

5,569,501 10/1996 Bailey et al.

5,945,191 08/1999 Hwang et al.

*6,064,148 05/2000 Tolt et al.
No issue date available.

FOREIGN REFERENCES

<u>Foreign Doc No.</u>	<u>Date</u>	<u>Country</u>	<u>Class</u>	<u>SubClass</u>
------------------------	-------------	----------------	--------------	-----------------

OTHER REFERENCE CITATIONS (incl. Author, Title, Date, Pertinent Pages, etc.)

Park, K.C. et al., +37 Enhancement of Field-Emission Characteristics
by Using Hydrogen-Free Diamond-Like Carbon Film Depositied by
Plasma-Enhanced Chemical Vapor Deposition+38 +0 (1996) SID 96 Digest
pp. 49-52.

PR Newswire. CeBIT Showcase for Major Advance in Magnetic Disk Storage
Capacity. Feb. 2000 Hanover, Germany. website:
<http://www.prnewswire.com> (Feb. 19, 2000).
